

REMARKS

Claims 1-22 are pending in this application.

The Examiner is requested to consider the reference cited in the Applicants' Information Disclosure Statement (IDS), filed on November 16, 2007. The Office Action does not mention the IDS.

I. Office Action is Improperly Made Final

It is improper for the current Office Action to be made Final. M.P.E.P. §706.07(a) states:

Under present practice, second or any subsequent actions on the merits shall be final, except where the examiner introduces a new ground of rejection that is neither necessitated by applicant's amendment of the claims, nor based on information submitted in an information disclosure statement filed during the period set forth in 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p).

The first Office Action, mailed August 29, 2007, rejected claims 15-19 and 22 under 35 U.S.C. §102(b) over Fan et al. (U.S. Patent No. 5,850,474) (Fan₂). The current Office Action now rejects claims 17-19 under 35 U.S.C. §103(a) over Fan₂ in view of Li et al. (U.S. Patent No. 6,360,009) (Li). Claims 17-19, and the claim they depend from, claim 15, are in their original form, that is, they were not amended in response to the previous Office Action. Further, Li was previously cited in an Information Disclosure Statement (IDS), filed June 1, 2004, and was used in the prior Office Action to reject other claims. Thus, the Office Action issued a rejection on new grounds that was neither necessitated by Applicants' amendment of the claims, nor based on information submitted in an IDS filed during the period set for in 37 C.F.R. §1.97(c). The rejection is improperly final and must be made non-final.

II. Claims 1-14 Are Patentable Over the Applied References

The Office Action rejects claims 1 and 8 under 35 U.S.C. §102(b) over Fan et al. (US2003/0072487) (Fan₁) and rejects claims 2-7 and 9-14 under 35 U.S.C. §103(a) over Fan₁ in view of Li. The rejections are respectfully traversed.

Fan₁ fails to disclose or suggest the combination of features recited in independent claims 1 and 8. Fan₁ fails to disclose or suggest a step of determining a background intensity level, as recited by independent claim 1, or the background intensity level determining module of claim 8. Fan₁ discloses a method in which an image is passed through a low-pass filter and then is decimated. See, for example, the Abstract of Fan₁. Fan₁ separates a document image into multiple sections. These sections may include a main background section, local background sections, text sections, image sections and composite sections. See, for example, paragraph [0014] and Fig. 2 of Fan₁. Fan₁ determines the main background by viewing the low resolution version of the document image and identifying NxN uniform blocks. The blocks are then grown based on color differences of adjacent pixels. Fan₁ at no point determines any intensities. Thus, Fan₁ fails to disclose or suggest a step or module for determining a background intensity level of an image based on substantially all of the pixels of the image, as recited by independent claims 1 and 8. The Office Action asserts, with no technical explanation, that the "main background" 304 in Fig. 3 corresponds to an intensity level. However, as explained above, Fan₁ teaches that the determinations are based on color not intensity levels.

Fan₁ fails to determine a background intensity level of an image, and therefore fails to disclose or suggest the background intensity level being based on substantially all the pixels of the image, as recited by independent claims 1 and 8. Moreover, Fan₁ fails to base any of its determinations on substantially all the pixels of the image.

Further, Fan₁ fails to disclose or suggest a step or module confirming the classification of a pixel based on the determined background intensity level of the image by comparing the intensity of the pixel with the determined background intensity level, determining if reclassification is required, and reclassifying the pixel when the reclassification is required, as recited by independent claims 1 and 8. Fan₁ fails to disclose determining any intensity level,

and therefore it is not possible for Fan₁ to confirm a classification in the manner recited in Applicants' claims. Accordingly, Fan₁ also is unable to compare the intensity of a pixel with a background intensity level.

Fan₁ discloses a reclassification; however, the reclassification of Fan₁ is based on the size of the object being reclassified. See Fan₁, paragraph [0027]. Additionally, Fan₁ discloses reassessing backgrounds to determine if the backgrounds are sweeps in step 412 of Fig. 10. The reassessment is based on breaking up the background area into multiple (16) sub regions and determining the maximum color difference between the regions. If the difference is larger than a predetermined threshold, the background is reclassified as a picture object. See Fan₁, Fig. 10 and paragraphs [0034] and [0035]. This is not confirming the classification of the pixel based on the determined background intensity level of the image by comparing the intensity of the pixel with the determined background intensity level, determining if reclassification is required, and reclassifying the pixel when reclassification is required, as recited by independent claims 1 and 8.

Claims 1 and 8 are patentable over Fan₁. Li and Fan₂ fail to overcome these multiple deficiencies of Fan₁, and therefore, independent claims 1 and 8, and all their dependent claims (2-7 and 9-14) are patentable over the applied references. Withdrawal of the rejections is requested.

III. Claims 15-22 Are Patentable Over the Applied References

The Office Action rejects claims 15, 16 and 22 under 35 U.S.C. §102(b) over Fan₂ and rejects claims 17-21 under 35 U.S.C. §103(a) over Fan₂ in view of Li. The rejections are respectfully traversed.

Applicants respectfully point out, that it was agreed upon in the November 6, 2007 personal interview, between Applicants' representatives and Examiner Woldemariam and his supervisor Examiner Ahmed, that all rejections in view of Fan₂ will be withdrawn. The

Examiners documented their decision determination in the Interview Summary. Specifically, the Interview Summary states "the examiner agreed to withdraw the rejections based on U.S. Patent number 5,850,974 to Fan et al." All rejections in the previous Office Action, mailed August 29, 2007, were over Fan et al., U.S. Patent number 5,850,474 (Fan₂). Thus, the number typed in the interview summary is an obvious typographical error in view of the rejections of the Office Action and because U.S. Patent Number 5,850,974 is to Kettl et al. and is directed towards a "device to produce an adjustable fluid jet."

Claims 15-22 have not been amended and therefore the results of the personal interview still apply. Accordingly, the rejection of claims 15-22 based on Fan₂ should be withdrawn, at least for the reasons discussed and agreed upon at the personal interview. The record of the interview is recorded in the interview summary and in Applicants' separate record included in the Amendment filed on November 16, 2007.

As agreed upon during the interview, Fan₂ fails to disclose or suggest the combination of features recited by independent claim 15. Fan₂ fails to disclose or suggest determining a background intensity level of an image, the background level being based on substantially all of the pixels of the image, as recited by independent claim 15. Fan₂ discloses that image data comprises multiple scanlines which typically include intensity information for each pixel. However, Fan₂ is silent on determining anything about the background, including the background intensity level of the image. Further, no determination made by Fan₂ is based on substantially all of the pixels of the image. Thus, Fan₂ fails to disclose or suggest determining a background intensity level of an image, the background level being based on substantially all of the pixels of the image, as recited by independent claim 15.

Moreover, Fan₂ fails to disclose or suggest checking the classification of at least a portion of the pixels of the image based on the determined background intensity level of the image and reclassifying pixels based on results of the checking step, as recited by independent

claim 15. Fan₂ discloses a macro-detection step followed by a micro-detection step. Fan₂ fails to disclose or suggest checking classifications of pixels based on the background intensity level of the image. Fan₂ discloses a confidence factor that is associated with image runs. The confidence factor is based on the uniformity of intensities of only pixels within the run. See col. 6, lines 14-26. The confidence factor is used to indicate a probability that an image type classification is correct. Reclassifications may occur if the confidence factor is low. The reclassification is based on the context of surrounding image runs and/or the context of the previous scanline. See col. 6, lines 57-59. Thus, Fan₂ fails to disclose or suggest checking classifications of pixels based on the background intensity level of the image, as recited by independent claim 15.

Claim 15 is patentable over Fan₂. Li and Fan₁ fail to cure the deficiencies of Fan₂ and therefore independent claim 15 is patentable over the applied references. Claims 16-22 depend from claim 15, and therefore also are patentable over the applied references. Withdrawal of the rejections is requested.

IV. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of all claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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